Exhibit 9

THE MERCK INDEX

AN ENCYCLOPEDIA OF
CHEMICALS, DRUGS, AND BIOLOGICALS

ELEVENTH EDITION

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Constit: About 5% volatile and fixed oils, anisic acid, tannin, resin, pectin.

Note: Japanese star anise is *Illicium anisatum* L. (*I. religiosum* Sieb. & Zucc.; *I. japonicum* Sieb.) and contains a toxic lactone called anisatin. Chinese star anise does not contain this toxic principle. Shikimic acid has been found in both.

USE: Manufacture of liqueurs and the volatile oil. The fruit as source of oil of anise.

THERAP CAT: Hemostatic.

8757. Starch. Amylum. $(C_6H_{10}O_5)_n$. Stored by plants: analogous to storage of fats by animals. Occurs as discrete granules in the mature grain of corn, *Zea mays* Linné, *Gramineae* or of wheat, *Triticum aestivum* Linné, *Gramineae* or tubers of potato, *Solanum tuberosum* Linné, *Solanaceae* or rice, *Oryza sativa* Linné, *Gramineae*. Starches are mixtures of two polymers: *amylose*, a linear (1→4)-α-D-glucan and *amylopectin*, a branched D-glucan with mostly α-D-(1→4) and approx 4% α-D-(1→6) linkages. The starch in corn contains approx 27% amylose and 73% amylopectin, with these two polymers so associated in the crystal lattice that they are practically insol in cold water or alcohol. *Refs:* J. N. BeMiller, "Starch Amylose" in *Industrial Gums*, R. L. Whistler, Ed. (Academic Press, New York, 2nd ed., 1973) pp 545-566; E. L. Powell, "Starch Amylopectin", *ibid.*, pp 567-576.

Although hydrolysis will not take place in cold water, and starch is comparatively resistant to naturally occurring enzymes, the reaction may be brought about by the use of acids or enzymes (α-amylase, β-amylase, amyloglucosidase). The hydrolysis reaction follows a different path depending on whether acids or enzymes are used. While acid hydrolysis produces a mixture of saccharides, the enzymes give more specific products. β-Amylase, for example, breaks off mostly maltose units, and amyloglucosidase yields mainly D-glucose. Chemistry and technology: R. L. Whistler, E. F. Paschall, Eds., *Starch Chemistry and Technology*, 2 vols. (Academic Press, New York, 1965); J. A. Radley, Ed., *Starch and Its Derivatives* (Chapman & Hall, London, 4th ed., 1968).

USE: Starching and sizing fabrics, etc.; paste; as indicator in iodometric analyses. In the food industry. Pharmaceutic aid (tablet disintegrant, filler, binder); dusting powder. Dietetic grades of corn starch are marketed as *Maizena; Mondamin*.

THERAP CAT: Antidote (iodine poisoning).

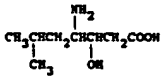
THERAP CAT (VET): Internally: demulcent, mild astringent, in diarrhea, as an antidote for iodine poisoning. Externally: absorbent, emollient, in dusting powders and in ointments.

8758. Starch, Soluble. Amylodextrin; amylogen. Prepd by treating potato or corn starch with dilute hydrochloric acid.

White, odorless, tasteless powder. Readily soluble in hot water; forms transparent mobile liquid.

USE: For determination of diastatic power of malt, etc.; as indicator in iodometric analyses.

8759. Statine. *[S-(R*,R*)]-4-Amino-3-hydroxy-6-methylheptanoic acid;* AHMHA. $C_9H_{17}NO_3$; mol wt 175.23. C 54.83%, H 9.78%, N 8.00%, O 27.39%. Amino acid present in pepstatin, *q.v.* Synthesis: H. Morishima *et al., J. Antibiot.* 26, 115 (1973). Abs config and stereospecific synthesis of all four isomers: M. Kinoshita *et al., ibid.* 249. Crystal structure: H. Nakamura *et al., ibid.* 255. Biosynthesis: H. Morishima *et al., ibid.* 27, 267 (1974). Alternate syntheses: M. Kinoshita *et al., Bull. Chem. Soc. Japan* 48, 570 (1975); W.-S. Liu, G. I. Glover, *J. Org. Chem.* 43, 754 (1978); D. H. Rich *et al., ibid.* 3624; K. E. Rittle *et al., ibid.* 47, 3016 (1982). Distribution in rats: D. A. Grant *et al., Biochem. Pharmacol.* 31, 2302 (1982).



mp 201-203° (dec). $[\alpha]_D^{25}$ −20° (c = 0.64 in water).

8760. Statolon. An antiviral substance which appears to be a macromolecular polyanionic polysaccharide composed of galacturonic acid, galactose, galactosamine, glucose, arabinose, xylose, and rhamnose. Produced by submerged culture fermentation, using *Penicillium stoloniferum* var. ATCC 14586: Stark *et al.*, U.S. pat. 3,108,047 (1963 to Lilly).

Prophylactically active against a wide range of viruses, including those causing canine distemper, lymphomatosis in fowl, shipping fever in cattle, transmissible gastroenteritis in swine, and coryza and other upper respiratory illnesses, as well as against ECHO viruses, enteroviruses in monkeys, MM neurotropic virus, Semliki Forest virus, and NEF 1 poliomyelitis virus. Antitumor activity demonstrated in experimental leukemia and sarcoma.

THERAP CAT: Antiviral.

8761. Stearic Acid. *Octadecanoic acid:* Emersol 132; Promulsin; Proviscol Wax. $C_{18}H_{36}O_2$; mol wt 284.47. C 75.99%, H 12.76%, O 11.25%. $CH_3(CH_2)_{16}COOH$. Occurs as a glyceride in tallow and other animal fats and oils, as well as in some vegetable oils; also prepd synthetically by hydrogenation of cottonseed and other vegetable oils.

White leaflets. d^{70} 0.847; mp 69-70°; bp 383°; n_D^{80} 1.4299. Slowly volatilizes at 90-100°. Very slightly sol in water. One gram dissolves in 21 ml alcohol, 5 ml benzene, 2 ml chloroform, 26 ml acetone, 6 ml carbon tetrachloride, 3.4 ml carbon disulfide; also sol in amyl acetate, toluene. LD_{50} i.v. in mice, rats: 23±0.7, 21.5±1.8 mg/kg, L. Orö, A. Wretlind, *Acta Pharmacol. Toxicol.* 18, 141 (1961).

U.S.P. stearic acid consists chiefly of a mixture of stearic and palmitic acids. It is in the form of white or slightly yellow, crystal masses, or a white to slightly yellow powder; slight tallow-like odor. Does not congeal below 54°.

Ethyl ester, $C_{20}H_{40}O_2$, *ethyl stearate.* White, cryst solid; odorless or practically so. mp 33-35°, bp 224°. Ethyl stearate of commerce solidifies at 20-24°; bp_4 180°. Insol in water; sol in alcohol or ether.

Methyl ester, $C_{19}H_{38}O_2$, *methyl stearate.* White crystals, mp 38-39°, bp_{15} 215°. Insol in water; sol in alcohol, ether.

USE: For suppositories, coating enteric pills, ointments, and for coating bitter remedies. Manuf stearates of aluminum, zinc, and other metals, stearin soap for opodeldoc, candles, phonograph records, insulators, modeling compds; impregnating plaster of Paris; in vanishing creams and other cosmetics.

8762. Stearyl Alcohol. *1-Octadecanol;* stenol. $C_{18}H_{38}O$; mol wt 270.48. C 79.92%, H 14.16%, O 5.91%. $CH_3(CH_2)_{16}CH_2OH$. The official substance is a mixture of solid alcohols consisting chiefly of stearyl alcohol. Preparation from ethyl stearate: Brown, Rao, *J. Am. Chem. Soc.* 78, 2582 (1956); Hesse, Schrödel, *Ann.* 607, 24 (1954). Prepn of technical grade from sperm whale oil: Maiorov *et al., Zh. Prikl. Khim.* 37, 1344 (1964).

Unctuous white flakes or granules, mp 56-60° (the pure substance, mp 59.4-59.8°, bp_{15} 210°). Sol in alcohol, ether, benzene, acetone.

USE: Substitute for cetyl alc in pharmaceutical dispensing, in cosmetic creams, for emulsions, textile oils and finishes, as antifoam agent, lubricant, and chemical raw material.

8763. Stenbolone. *17β-Hydroxy-2-methyl-5α-androst-1-en-3-one;* 2-methyl-5α-androst-1-en-17β-ol-3-one; 2-methyl-17β-hydroxy-5α-androst-1-en-3-one; stenobolone (rescinded USAN). $C_{20}H_{30}O_2$; mol wt 302.44. C 79.42%, H 10.00%, O 10.58%. Preparation of free alcohol and acetate: Mauli, *J. Am. Chem. Soc.* 82, 5494 (1960); Kaspar *et al.*, Ger. pat. 1,096,356 (1961 to Schering AG); *C.A.* 55, 27440b (1961); Counsell *et al., J. Org. Chem.* 27, 248 (1962); Brit. pat. 925,849 (1963 to Syntex).